

CLAIMS

- 1 1. A method for reducing artifacts in a video stream, comprising the steps of:
2 decoding the video stream; and
3 adding noise to at least one pixel in a picture in the video stream following decoding in
4 an amount correlated to luminance information of at least a portion of a current picture.
- 1 2. The method according to claim 1 further comprising the step of correlating the
2 noise using a factor dependent on the temporal correlation of the current picture image with
3 one of a previously displayed or decoded picture.
- 1 3. The method according to claim 2 wherein the correlation factor is established
2 in accordance with one of a luma or color component.
- 1 4. The method according to claim 2 further comprising the step of adding noise to a
2 color component of the picture in accordance with a luma component.
- 1 5. The method according to claim 2 wherein the correlation factor is first
2 established on an N x N pixel picture block basis (where N is an integer) prior to interpolation
3 of the additive noise.
- 1 6. The method according to claim 1 further comprising the step of adjusting the
2 noise based on the intensity of an N x N block (where N is an integer) of adjacent pixels.
- 1 7. The method according to claim 1 wherein the amount of noise is correlated
2 using an approximation of a Finite Impulse Response (IIR) filter.
- 1 8. A decoder arrangement for decoding a coded video stream to yield reduced
2 artifacts, comprising:
3 a video decoder for decoding an incoming coded video stream to yield decoded
4 pictures ;

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5 a reference picture store for storing at least one previously decoded picture for use by
6 the decoder in decoding future pictures,

7 a noise generator noise for generating noise for addition to at least one pixel in a
8 decoded picture in an amount correlated to correlated to luminance information of at least a
9 portion of a current picture ;

10 a noise picture store for storing the noise information for subsequent use by the noise
11 generator.

12 a summing block for summing the noise generated by the noise generator with a
13 decoded picture from the decoder; and

14 a clipper for clipping the summed noise and decoded picture.

1 9. The decoder arrangement according to claim 8 wherein the noise generator
2 implements an instantiation of a Finite Impulse Response filter.

1 10. The decoder arrangement according to claim 8 wherein the noise generator
2 implements an approximation of an Infinite Impulse Response filter.

1 11. The decoder arrangement according to claim 8 wherein the noise generator
2 generates noise in accordance with decoded pictures and bit stream information supplied from
3 the decoder.

1 12. The decoder arrangement according to claim 8 wherein the bit stream
2 information comprises a quantization parameter.

1 13. The decoder arrangement according to claim 8 further including a second
2 picture store for storing an $N \times N$ pixel block picture average, where N is an integer, for use
3 by the noise generator.

1 14. A decoder arrangement for decoding a coded video stream to yield reduced
2 artifacts, comprising:

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3 a video decoder for decoding an incoming coded video stream to yield decoded
4 pictures ;

5 a reference picture store for at least one storing at least one previously decoded picture
6 for use by the decoder in decoding future pictures,

7 a noise generator noise for generating noise in accordance with decoded pictures and
8 bit stream information from the decoder for addition to at least one pixel in decoded in an
9 amount correlated to additive noise of at least one pixel in a prior picture;

10 a picture store for storing an $N \times N$ pixel block picture average, where N is an integer,
11 for use by the noise generator. a summing block for summing the noise generated by the
12 noise generator with a decoded picture from the decoder; and

13

1 15. The decoder arrangement according to claim 20 wherein the noise generator
2 implements an instantiation of a Finite Impulse Response filter.